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2011 MICHIGAN FALL TURKEY HUNTER SURVEY

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ABSTRACT

A survey of turkey hunters was conducted following the 2011 fall hunting season to determine turkey harvest and hunter participation. In 2011, 20,906 hunters purchased 22,386 licenses for the fall turkey hunting season, which was 25% lower than in 2010 (30,005 licenses sold in 2010). Most license buyers (95%) purchased a single hunting license. During the 2011 fall hunt, an estimated 15,712 hunters harvested about 4,724 turkeys. Hunter numbers and their hunting effort decreased 24% and 25%, respectively, from 2010. The 2011 harvest decreased 29% from 2010 (6,645 turkeys harvested in 2010). Hunter success was 28% in 2011 (versus 29% success in 2010). About 56% of the hunters in 2011 rated their hunting experience as excellent, very good, or good (versus 59% satisfaction in 2010). The number of hunters, hunting effort, and turkey harvested in 2011 decreased significantly from 2010; however, hunting success and hunter satisfaction did not change significantly from 2010.

INTRODUCTION

Fall wild turkey (*Meleagris gallopavo*) hunting seasons were implemented in Michigan to help maintain turkey populations at levels matching biological and social carrying capacities. In 2011, 8 management units totaling about 36,078 square miles were open for fall turkey hunting during September 15-November 14 (Figure 1).

People interested in obtaining a turkey hunting license could enter into a random drawing (lottery) conducted by the Department of Natural Resources (DNR) or purchase a license for Hunt 501 without going through the lottery. Applicants could choose one hunt area for the drawing. Any licenses available after the drawing was completed were made available on a first-come, first-served basis to applicants and nonapplicants



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beginning August 29. Licenses were available for five management units (units HA, L, M, W, and YY) after the drawing was completed (Table 1). Hunters could purchase one of these remaining licenses per day until quotas were met.

Licenses for Hunt 407 (Unit HA) and Hunt 501 (Unit YY) were valid on private lands only, while licenses for hunts 401, 402, 403, 404, 405 and 406 (units G, GB, GC, L, M, and W) were valid on either land ownership types (i.e., public or private land). Hunters were allowed to take one turkey of either sex with the harvest tag issued with each license. Turkey could be harvested with a shotgun, crossbow, or archery equipment. Hunters 12-years-old or older could use a crossbow to hunt turkeys. Hunters using a crossbow were required to obtain a free crossbow stamp, except hunters with a disability already hunting under a DNR-issued crossbow permit did not need the stamp.

The Pure Michigan Hunt (PMH) was a unique multi-species hunting opportunity offered for the first time in 2010. Individuals could purchase an unlimited number of applications for the PMH. Three individuals were randomly chosen from all applications, and winners received elk, bear, spring turkey, fall turkey, and antlerless deer hunting licenses and could participate in a reserved waterfowl hunt on a managed waterfowl area. The fall turkey hunting licenses were valid for all areas open for hunting turkey.

The Natural Resources Commission and DNR have the authority and responsibility to protect and manage the wildlife resources of the state of Michigan. Harvest surveys are one of the management tools used to meet their statutory responsibility. Estimating harvest, hunting effort, and hunter satisfaction are among the primary objectives of these surveys.

METHODS

The DNR provided hunters the option to voluntarily report information about their turkey hunting activity via the internet. This option was advertised in the hunting regulations booklet, on the DNR website, and in an email message that was sent to licensees that had provided an email address to the DNR. Hunters could report information anytime during the hunting season. Hunters reported whether they hunted, number of days spent afield, and how many turkeys they harvested. Successful hunters also were asked to report where their turkeys were taken (public or private land) and beard length of harvested birds. Birds with a beard <4 inches long were classified as juveniles (<1 year old), while birds with longer beards were adults (≥ 1 year old) (Kelly 1975). In addition, hunters were asked what type of hunting equipment was used to hunt turkeys and kill turkeys. Finally, hunters rated their overall hunting experience (excellent, very good, good, fair, or poor).

Following the 2011 fall turkey hunting season, a questionnaire was sent to 6,599 randomly selected people that had purchased a turkey hunting license (resident turkey, senior resident turkey, and nonresident turkey licenses) and had not already voluntarily reported harvest information via the internet. Hunters receiving the questionnaire were asked to report the same information that was collected from hunters that reported voluntarily on the internet.

Estimates were calculated using a stratified random sampling design that included 11 strata (Cochran 1977). Strata 1-8 consisted of hunters with licenses for a single management unit ($N_G=96$; $N_{GB}=143$; $N_{GC}=113$; $N_{HA}=1,094$; $N_L=661$; $N_M=1,058$; $N_W=111$; and $N_{YY}=16,583$). The ninth stratum included hunters obtaining only a Pure Michigan Hunt license ($N=2$). The tenth stratum consisted of hunters having licenses for multiple management units ($N=127$). Finally, hunters that had voluntarily reported information about their hunting activity via the internet before the mail survey sample was selected were treated as the eleventh stratum ($N=919$).

Because estimates were based on information collected from random samples of hunting license buyers, these estimates were subject to sampling errors (Cochran 1977). Thus, a 95% confidence limit (CL) was calculated for each estimate. In theory, this CL can be added and subtracted from the estimate to calculate the 95% confidence interval. The confidence interval is a measure of the precision associated with the estimate and implies the true value would be within this interval 95 times out of 100. Unfortunately, there are several other possible sources of error in surveys that are probably more serious than theoretical calculations of sampling error. They include failure of participants to provide answers (nonresponse bias), question wording, and question order. It is very difficult to measure these biases; thus, estimates were not adjusted for these possible biases.

Statistical tests are used routinely to determine the likelihood that the differences among estimates are larger than expected by chance alone. The overlap of 95% confidence intervals was used to determine whether estimates differed. Non-overlapping 95% confidence intervals was equivalent to stating the difference between the means was larger than would be expected 995 out of 1,000 times, if the study had been repeated (Payton et al. 2003).

Questionnaires were mailed initially during late December 2011, and up to two follow-up questionnaires were mailed to nonrespondents. Although 6,599 people were sent the questionnaire, 64 surveys were undeliverable resulting in an adjusted sample size of 6,535. Questionnaires were returned by 4,788 people, yielding a 73% adjusted response rate. In addition, 919 people voluntarily reported information about their hunting activity via the internet.

RESULTS

In 2011, the DNR offered 50,053 licenses for sale (versus 52,553 licenses in 2010), and hunters purchased 22,386 licenses (versus 30,005 licenses in 2010) for the fall turkey hunting season (Table 1). A total of 2,220 licenses were purchased by people successful in the drawing, and another 654 leftover licenses were purchased by people that had applied for a hunt in the drawing. In addition, 19,512 licenses were purchased by people that had not entered into the drawing.

The number of licenses sold in 2011 decreased 25% from 2010. The average age of the license buyers was 49 years (Figure 2). About 6% of the license buyers were

younger than 17 years old (1,262). Most license buyers (95%) purchased a single hunting license in 2011 (Figure 3). About 4% of hunters purchased 2 licenses, 1% of hunters purchased 3 licenses, and less than 1% of hunters purchased 4 or more licenses.

The number of people buying a license in 2011 (20,906) increased by about 8% in ten years from 2001 (19,348 people purchased a license in 2001). Although the overall number of license buyers increased during the last ten years, there were fewer license buyers for most age classes between 29 and 47 years of age in 2011, compared to 2001 (Figure 4). However, there were increased hunter numbers among the youngest and oldest age classes in 2011. The increased hunter numbers in the oldest age classes likely represented the rising share of older people in the population as the baby-boom generation aged and life expectancies have increased. The increased participation among the youngest hunters likely reflected the lowering of the minimum age requirements. In 2011, hunters had to be at least 10 years old to participate; while the hunters had to be at least 12 years old to participate in 2001.

In 2011, about 15,712 hunters spent 102,866 days afield pursuing turkeys ($\bar{x} = 6.5 \pm 0.2$ days/hunter) (Tables 2 and 3, Figure 5). The number of people pursuing turkeys in 2011 decreased significantly by 24%, and their hunting effort decreased significantly by 25% from 2010. About 95% of the hunters that went afield were males ($14,973 \pm 251$), 5% of the hunters were females (725 ± 101), and the sex of less than 1% of hunters was unknown (14 ± 1).

About 28% of active hunters successfully harvested a turkey in 2011, and they harvested an estimated 4,724 turkeys (Tables 4 and 5). The number of turkeys harvested decreased significantly by 29% from 2010 (6,645 turkeys harvested in 2010), but hunter success in 2011 was not significantly different from 2010 (Figure 5). Among the 4,329 hunters that took at least one turkey, 94% ($4,064 \pm 218$) of these hunters took one turkey, 4% (184 ± 49) took 2 turkeys, 1% (54 ± 28) took 3 turkeys, and less than 1% took more than 3 turkeys (Figure 6). Hunter success was statistically greater for hunters using private lands than for hunters using public lands in 2011 (28% versus 19%, Table 4).

About 94% ($14,821 \pm 242$) of turkey hunters hunted solely on private land, 4% (617 ± 36) hunted on public land only, and 2% (242 ± 26) hunted on both private and public lands. Additionally, 32 ± 11 hunters hunted on land of unknown ownership. Of the 4,724 turkeys harvested in 2011, 96% of these birds were taken on private land (4,541), while about 4% of the harvest (177) was taken on public land (Table 5). Additionally, 6 birds were harvested from land of unknown ownership. About 58% of the harvested birds had a beard ($2,742 \pm 206$). Most of these bearded birds (86%) were adults ($2,349 \pm 193$); 14% were juvenile birds (393 ± 78).

Of the 15,712 turkey hunters in 2011, nearly 56% rated their hunting experience as either excellent, very good, or good (Table 6). Satisfaction was statistically greater for hunters using private lands than for hunters using public lands (56% versus 49%). Changes in hunter satisfaction between years generally parallel changes in hunter success (Figure 7). Between 2010 and 2011, hunter success was nearly unchanged

(29% in 2010 versus 28% in 2011), and satisfaction was nearly unchanged (59% in 2010 versus 56% in 2011).

Hunter numbers were greatest in Kent, St. Clair, Sanilac, Tuscola, Allegan, and Jackson counties; these counties had more than 550 hunters (Table 7). Harvest was greatest in Jackson, Tuscola, Lapeer, Kent, Ottawa, Allegan, Saginaw, and Calhoun counties; these counties had more than 150 turkeys taken by hunters.

Most hunters ($65 \pm 1\%$; $10,265 \pm 275$ hunters) used shotguns while hunting turkeys, although $27 \pm 1\%$ ($4,176 \pm 222$) of the hunters used either a compound, recurve, or long bow and $23 \pm 1\%$ ($3,626 \pm 211$) used a crossbow. About 75% ($3,540 \pm 238$) of the harvested turkeys were taken with a shotgun, while 10% (484 ± 85) were taken with either a compound, recurve, or long bow. About 15% (701 ± 103) of harvested turkeys were taken with a crossbow. About $31 \pm 2\%$ of the hunters using a shotgun took at least one turkey with their shotgun; $11 \pm 2\%$ of hunters using a bow took a turkey; and $19 \pm 3\%$ of the hunters using a crossbow harvested a turkey.

About $68 \pm 3\%$ of the turkey hunters using a crossbow had obtained the crossbow stamp. However, $83 \pm 2\%$ of the hunters using a crossbow in 2011 had obtained a crossbow stamp during at least one year during 2009-2011.

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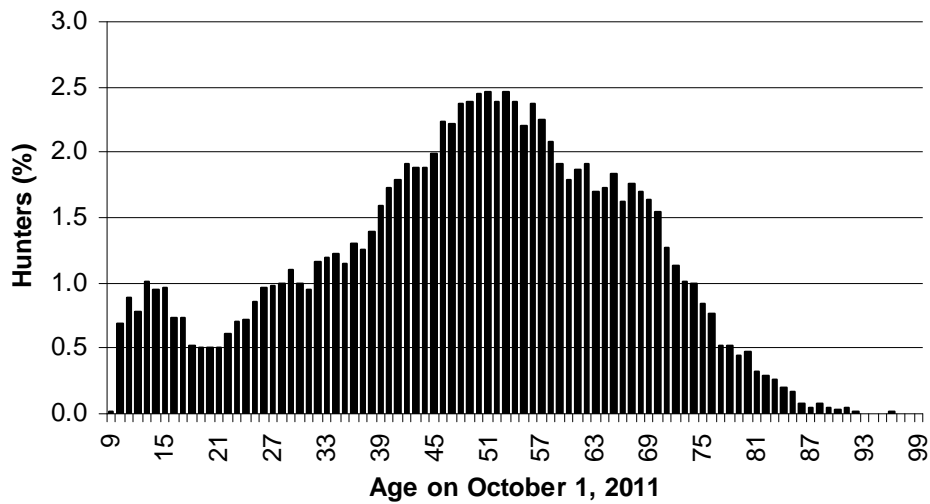


Figure 2. Age of people that purchased a turkey hunting license in Michigan for the 2011 fall hunting season ($\bar{x} = 49$ years). Licenses were purchased by 20,906 people.

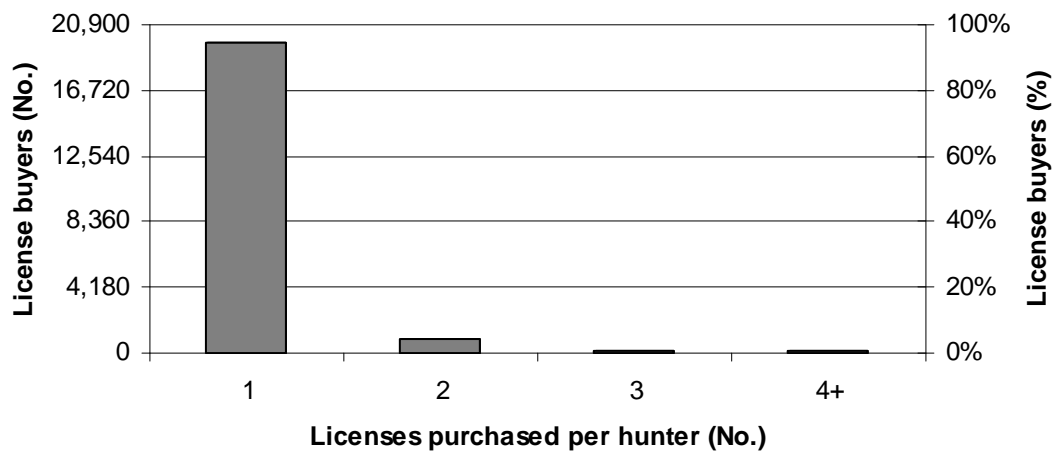


Figure 3. Number of licenses purchased per person for hunting turkey in Michigan during the 2011 fall hunting season.

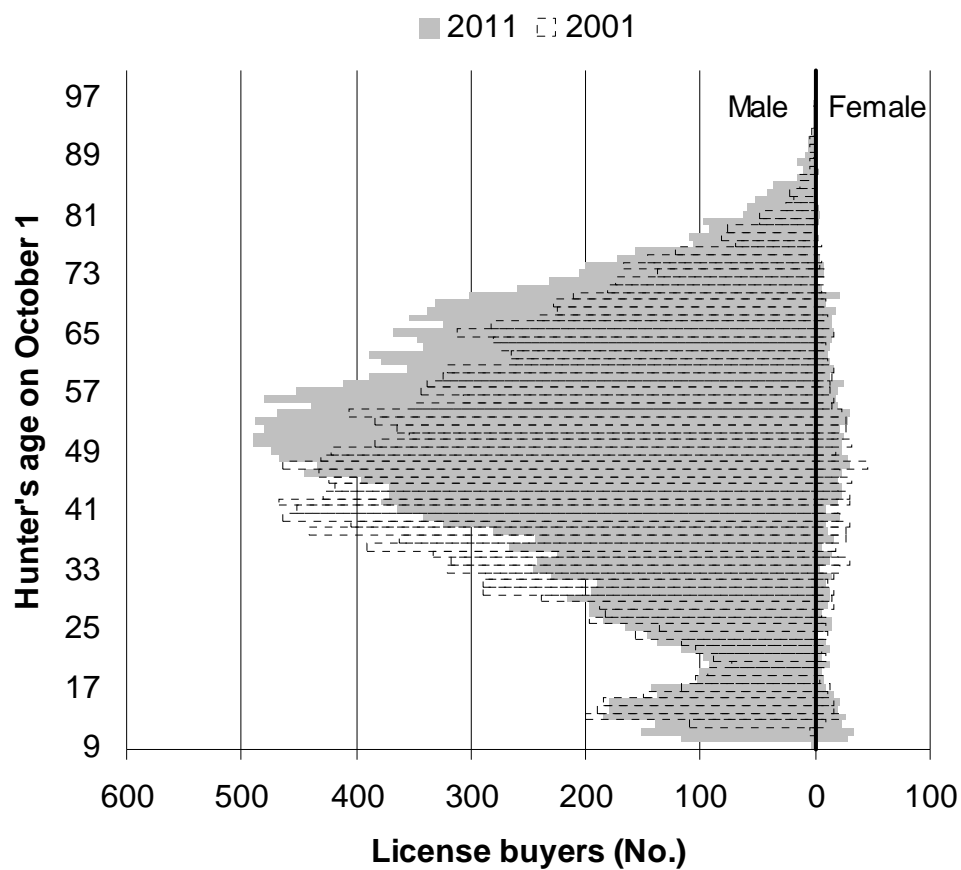


Figure 4. Number of fall turkey hunting license buyers in Michigan by age and sex during 2001 and 2011 hunting seasons. The number of people buying a license was 19,348 in 2001 and 20,906 in 2011.

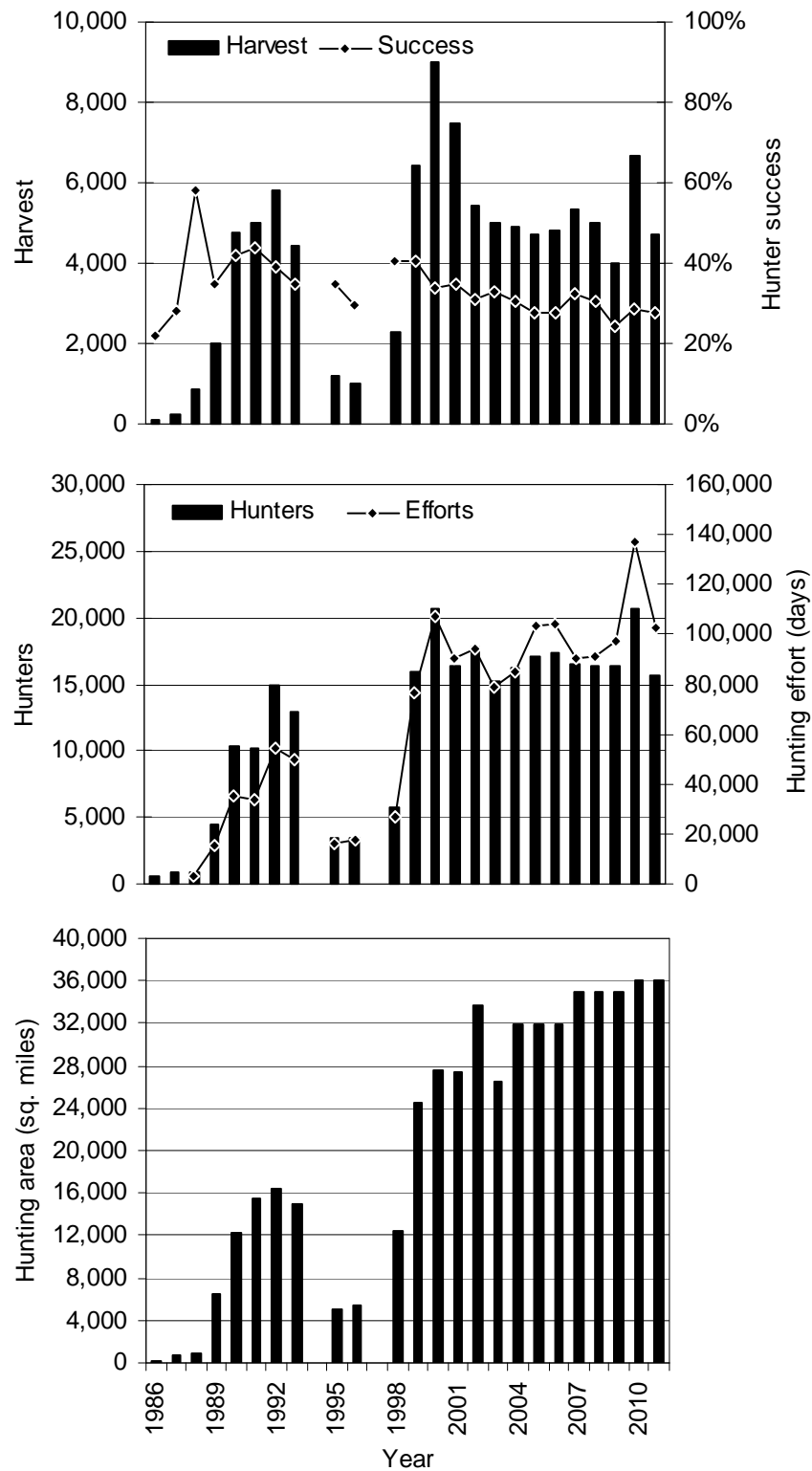


Figure 5. Number of hunters, hunting efforts (days), harvest, hunting success, and hunting area during the fall turkey hunting season, 1986-2011. Turkeys were not hunted during the fall in 1994 and 1997.

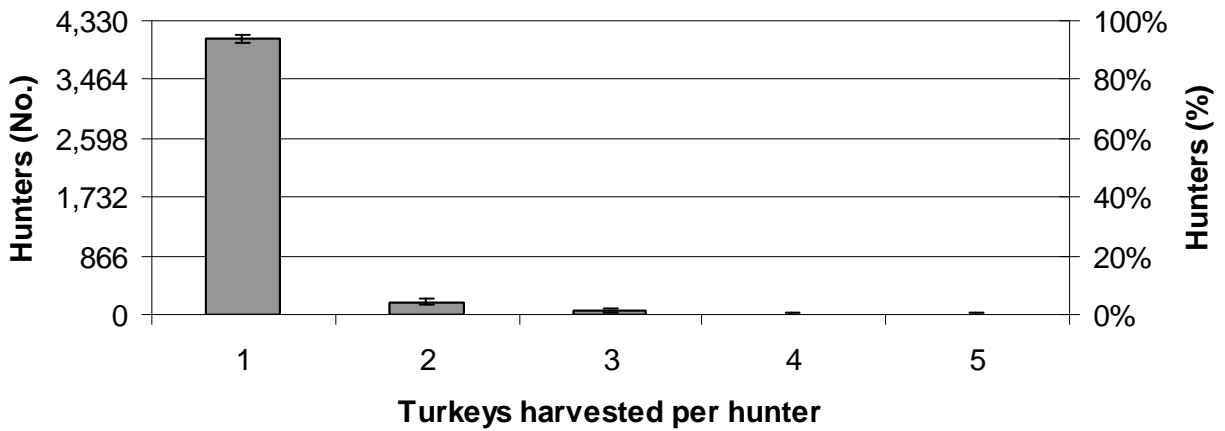


Figure 6. Number of turkeys harvested per successful hunter in Michigan during the 2011 fall hunting season.

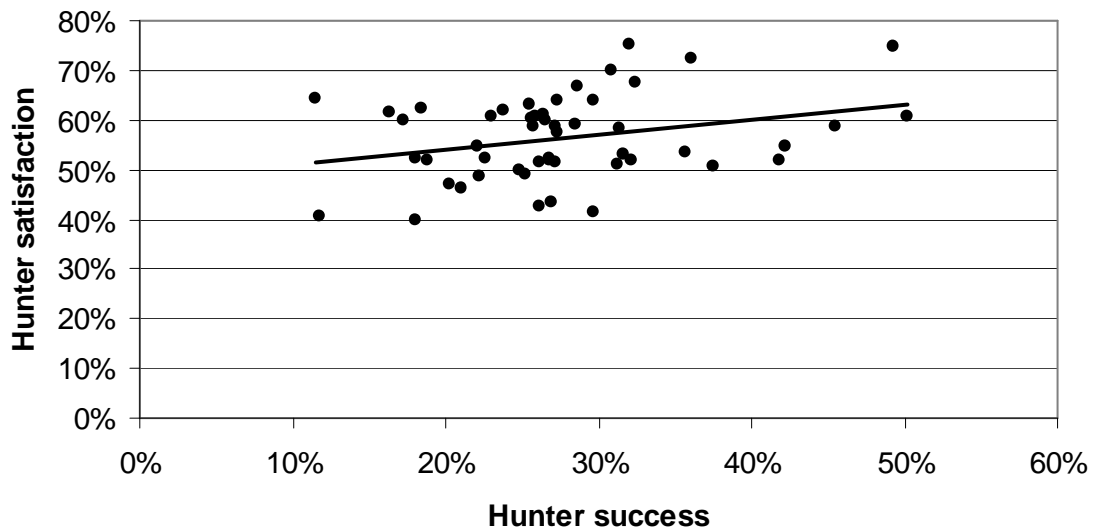


Figure 7. Hunter satisfaction (expressed as the percentage of hunters rating their hunting experience as excellent, very good, or good) associated with hunter success for each of 51 counties in Michigan during the 2011 fall turkey hunting season (included only counties with at least 20 hunters).

Table 1. Number of hunting licenses available and people applying for licenses during the 2011 Michigan fall turkey hunting season.

| Management unit | Hunt | Licenses available (quota) ^a | Number of eligible applicants | Number of applicants successful in drawing | Number of licenses remaining after drawing | Number of licenses purchased by successful applicants | Number of leftover licenses purchased by applicants | Number of leftover licenses purchased by people not in the drawing | Licenses sold |
|----------------------|-----------------|---|-------------------------------|--|--|---|---|--|---------------|
| G | 401 | 200 | 350 | 200 | 0 | 123 | 0 | 0 | 123 |
| GB | 402 | 250 | 293 | 250 | 0 | 165 | 0 | 0 | 165 |
| GC | 403 | 200 | 835 | 200 | 0 | 134 | 0 | 0 | 134 |
| HA ^b | 407 | 1,700 | 1,110 | 1,110 | 590 | 752 | 63 | 473 | 1,288 |
| L | 404 | 1,000 | 629 | 629 | 371 | 466 | 40 | 290 | 796 |
| M | 405 | 1,500 | 685 | 685 | 815 | 468 | 61 | 691 | 1,220 |
| W | 406 | 200 | 178 | 178 | 22 | 109 | 4 | 15 | 128 |
| YY ^b | 501 | 45,000 | 0 | 0 | 45,000 | 0 | 486 | 18,043 | 18,529 |
| Pure MI ^c | NA ^c | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| Statewide | All | 50,053 | 4,080 | 3,252 | 46,798 | 2,220 | 654 | 19,512 | 22,386 |

^aQuotas were assigned by hunts within each management unit.

^bLicenses were valid on private lands only.

^cPure Michigan Hunt. These hunters could hunt in any management unit.

Table 2. Number of hunters during the 2011 Michigan fall turkey hunting season.

| Area and hunting license | Land type | | | | | | | |
|--------------------------------|-----------|--------|--------|--------|---------|--------|--------------------|--------|
| | Private | | Public | | Unknown | | All land types | |
| | Total | 95% CL | Total | 95% CL | Total | 95% CL | Total ^a | 95% CL |
| G | | | | | | | | |
| 401 | 42 | 5 | 58 | 5 | 1 | 1 | 93 | 4 |
| 501 ^b | 1,283 | 142 | 0 | 0 | 0 | 0 | 1,283 | 142 |
| Multiple ^c | 13 | 3 | 2 | 2 | 0 | 0 | 16 | 4 |
| Subtotal | 1,338 | 142 | 60 | 5 | 1 | 1 | 1,391 | 142 |
| GB | | | | | | | | |
| 402 | 83 | 7 | 62 | 7 | 0 | 0 | 128 | 5 |
| 501 ^b | 1,132 | 134 | 0 | 0 | 0 | 0 | 1,132 | 134 |
| Multiple ^c | 21 | 4 | 1 | 1 | 0 | 0 | 21 | 4 |
| Subtotal | 1,235 | 134 | 63 | 7 | 0 | 0 | 1,281 | 134 |
| GC | | | | | | | | |
| 403 | 50 | 5 | 51 | 5 | 0 | 0 | 89 | 5 |
| 501 ^b | 2,654 | 194 | 0 | 0 | 0 | 0 | 2,654 | 194 |
| Multiple ^c | 9 | 3 | 0 | 0 | 0 | 0 | 9 | 3 |
| Subtotal | 2,713 | 194 | 51 | 5 | 0 | 0 | 2,752 | 194 |
| HA | | | | | | | | |
| 407 ^b | 909 | 30 | 0 | 0 | 0 | 0 | 909 | 30 |
| Multiple ^c | 20 | 4 | 0 | 0 | 0 | 0 | 20 | 4 |
| Subtotal | 929 | 30 | 0 | 0 | 0 | 0 | 929 | 30 |
| L | | | | | | | | |
| 404 | 371 | 23 | 263 | 22 | 5 | 4 | 585 | 18 |
| 501 ^b | 2,529 | 192 | 0 | 0 | 0 | 0 | 2,529 | 192 |
| Multiple ^c | 29 | 4 | 6 | 2 | 1 | 0 | 32 | 5 |
| Subtotal | 2,931 | 193 | 270 | 22 | 6 | 4 | 3,147 | 193 |
| M | | | | | | | | |
| 405 | 576 | 34 | 376 | 32 | 19 | 9 | 838 | 29 |
| Multiple ^c | 5 | 2 | 7 | 3 | 0 | 0 | 12 | 3 |
| Subtotal | 581 | 34 | 384 | 32 | 19 | 9 | 851 | 30 |
| W | | | | | | | | |
| 406 | 49 | 5 | 27 | 4 | 1 | 1 | 75 | 5 |
| 501 ^b | 447 | 85 | 0 | 0 | 0 | 0 | 447 | 85 |
| Multiple ^c | 3 | 2 | 4 | 2 | 0 | 0 | 5 | 2 |
| Subtotal | 500 | 85 | 31 | 5 | 1 | 1 | 527 | 85 |
| Eastern YY ^d | | | | | | | | |
| 501 ^b | 4,208 | 232 | 0 | 0 | 0 | 0 | 4,208 | 232 |
| Multiple ^c | 5 | 2 | 0 | 0 | 0 | 0 | 5 | 2 |
| Subtotal | 4,213 | 232 | 0 | 0 | 0 | 0 | 4,213 | 232 |
| Unknown YY ^e | | | | | | | | |
| 501 ^b | 925 | 124 | 0 | 0 | 0 | 0 | 925 | 124 |
| Multiple ^c | 10 | 3 | 2 | 2 | 0 | 0 | 10 | 3 |
| Subtotal | 935 | 124 | 2 | 2 | 0 | 0 | 935 | 124 |
| Statewide | | | | | | | | |
| Total | 15,029 | 243 | 862 | 41 | 28 | 10 | 15,712 | 241 |

^aNumber of hunters may not add up to total because hunters could hunt on both private and public lands.^bLicenses were valid on private lands only.^cHunters that purchased multiple hunting licenses for multiple hunting areas.^dIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.^eHunting activity occurred at unknown location within Management Unit YY.

Table 3. Days of hunting effort during the 2011 Michigan fall turkey hunting season.

| Area and hunting license | Land type | | | | | | | |
|--------------------------------|-----------|--------|--------|--------|---------|--------|--------------------|--------|
| | Private | | Public | | Unknown | | All land types | |
| | Total | 95% CL | Total | 95% CL | Total | 95% CL | Total ^a | 95% CL |
| G | | | | | | | | |
| 401 | 185 | 30 | 397 | 72 | 0 | 0 | 582 | 72 |
| 501 ^b | 8,094 | 1,202 | 0 | 0 | 0 | 0 | 8,094 | 1,202 |
| Multiple ^c | 62 | 19 | 11 | 9 | 0 | 0 | 73 | 20 |
| Subtotal | 8,340 | 1,202 | 408 | 73 | 0 | 0 | 8,749 | 1,204 |
| GB | | | | | | | | |
| 402 | 499 | 69 | 355 | 53 | 0 | 0 | 854 | 79 |
| 501 ^b | 6,552 | 1,114 | 0 | 0 | 0 | 0 | 6,552 | 1,114 |
| Multiple ^c | 122 | 27 | 4 | 3 | 0 | 0 | 126 | 28 |
| Subtotal | 7,173 | 1,116 | 358 | 54 | 0 | 0 | 7,531 | 1,117 |
| GC | | | | | | | | |
| 403 | 338 | 45 | 301 | 48 | 0 | 0 | 640 | 59 |
| 501 ^b | 17,440 | 1,837 | 0 | 0 | 0 | 0 | 17,440 | 1,837 |
| Multiple ^c | 77 | 30 | 0 | 0 | 0 | 0 | 77 | 30 |
| Subtotal | 17,856 | 1,838 | 301 | 48 | 0 | 0 | 18,157 | 1,838 |
| HA | | | | | | | | |
| 407 ^b | 5,803 | 384 | 0 | 0 | 0 | 0 | 5,803 | 384 |
| Multiple ^c | 121 | 32 | 0 | 0 | 0 | 0 | 121 | 32 |
| Subtotal | 5,924 | 386 | 0 | 0 | 0 | 0 | 5,924 | 386 |
| L | | | | | | | | |
| 404 | 2,226 | 236 | 1,579 | 205 | 13 | 13 | 3,818 | 281 |
| 501 ^b | 18,544 | 2,032 | 0 | 0 | 0 | 0 | 18,544 | 2,032 |
| Multiple ^c | 175 | 37 | 27 | 12 | 10 | 0 | 213 | 42 |
| Subtotal | 20,948 | 2,046 | 1,609 | 205 | 23 | 13 | 22,579 | 2,051 |
| M | | | | | | | | |
| 405 | 2,895 | 273 | 2,202 | 275 | 70 | 64 | 5,168 | 368 |
| Multiple ^c | 21 | 10 | 41 | 17 | 0 | 0 | 62 | 19 |
| Subtotal | 2,916 | 273 | 2,243 | 276 | 70 | 64 | 5,230 | 369 |
| W | | | | | | | | |
| 406 | 296 | 48 | 138 | 28 | 25 | 23 | 460 | 53 |
| 501 ^b | 2,530 | 596 | 0 | 0 | 0 | 0 | 2,530 | 596 |
| Multiple ^c | 15 | 10 | 34 | 22 | 0 | 0 | 49 | 26 |
| Subtotal | 2,841 | 598 | 172 | 36 | 25 | 23 | 3,039 | 599 |
| Eastern YY ^d | | | | | | | | |
| 501 ^b | 27,000 | 2,176 | 0 | 0 | 0 | 0 | 27,000 | 2,176 |
| Multiple ^c | 22 | 10 | 0 | 0 | 0 | 0 | 22 | 10 |
| Subtotal | 27,022 | 2,176 | 0 | 0 | 0 | 0 | 27,022 | 2,176 |
| Unknown YY ^e | | | | | | | | |
| 501 ^b | 4,591 | 874 | 0 | 0 | 0 | 0 | 4,591 | 874 |
| Multiple ^c | 37 | 17 | 7 | 5 | 0 | 0 | 45 | 18 |
| Subtotal | 4,628 | 874 | 7 | 5 | 0 | 0 | 4,636 | 874 |
| Statewide | | | | | | | | |
| Total ^a | 97,648 | 3,352 | 5,100 | 360 | 118 | 69 | 102,866 | 3,366 |

^aColumn and row totals for hunting effort may not equal statewide totals because of rounding errors.^bLicenses were valid on private lands only.^cHunters that purchased multiple hunting licenses for multiple hunting areas.^dIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.^eHunting activity occurred at unknown location within Management Unit YY.

Table 4. Hunting success (proportion of hunters taking at least one turkey) during the 2011 Michigan fall turkey hunting season.

| Area and hunting license | Land type | | | | | | | |
|--------------------------|-----------|--------|--------|--------|---------|--------|----------------|--------|
| | Private | | Public | | Unknown | | All land types | |
| | Total | 95% CL | Total | 95% CL | Total | 95% CL | Total | 95% CL |
| G | | | | | | | | |
| 401 | 17 | 6 | 10 | 3 | 0 | 0 | 14 | 3 |
| 501 ^a | 25 | 5 | 0 | 0 | 0 | 0 | 25 | 5 |
| Multiple ^b | 44 | 13 | 100 | 0 | 0 | 0 | 53 | 12 |
| Subtotal | 25 | 5 | 14 | 4 | 0 | 0 | 25 | 5 |
| GB | | | | | | | | |
| 402 | 28 | 5 | 12 | 5 | 0 | 0 | 24 | 4 |
| 501 ^a | 31 | 6 | 0 | 0 | 0 | 0 | 31 | 6 |
| Multiple ^b | 34 | 9 | 100 | 0 | 0 | 0 | 34 | 9 |
| Subtotal | 31 | 5 | 14 | 5 | 0 | 0 | 30 | 5 |
| GC | | | | | | | | |
| 403 | 17 | 5 | 10 | 4 | 0 | 0 | 15 | 4 |
| 501 ^a | 29 | 4 | 0 | 0 | 0 | 0 | 29 | 4 |
| Multiple ^b | 86 | 12 | 0 | 0 | 0 | 0 | 86 | 12 |
| Subtotal | 29 | 4 | 10 | 4 | 0 | 0 | 29 | 3 |
| HA | | | | | | | | |
| 407 ^c | 22 | 3 | 0 | 0 | 0 | 0 | 22 | 3 |
| Multiple ^c | 37 | 10 | 0 | 0 | 0 | 0 | 37 | 10 |
| Subtotal | 23 | 3 | 0 | 0 | 0 | 0 | 23 | 3 |
| L | | | | | | | | |
| 404 | 24 | 4 | 19 | 4 | 33 | 36 | 23 | 3 |
| 501 ^a | 26 | 4 | 0 | 0 | 0 | 0 | 26 | 4 |
| Multiple ^b | 50 | 9 | 40 | 19 | 0 | 0 | 50 | 8 |
| Subtotal | 26 | 3 | 19 | 4 | 28 | 30 | 25 | 3 |
| M | | | | | | | | |
| 405 | 34 | 4 | 22 | 4 | 22 | 20 | 34 | 3 |
| Multiple ^c | 25 | 19 | 33 | 17 | 0 | 0 | 30 | 13 |
| Subtotal | 34 | 4 | 22 | 4 | 22 | 20 | 34 | 3 |
| W | | | | | | | | |
| 406 | 28 | 6 | 23 | 8 | 0 | 0 | 27 | 5 |
| 501 ^a | 31 | 9 | 0 | 0 | 0 | 0 | 31 | 9 |
| Multiple ^b | 64 | 23 | 0 | 0 | 0 | 0 | 47 | 20 |
| Subtotal | 31 | 8 | 20 | 7 | 0 | 0 | 30 | 8 |
| Eastern YY ^c | | | | | | | | |
| 501 ^a | 27 | 3 | 0 | 0 | 0 | 0 | 27 | 3 |
| Multiple ^b | 25 | 19 | 0 | 0 | 0 | 0 | 25 | 19 |
| Subtotal | 27 | 3 | 0 | 0 | 0 | 0 | 27 | 3 |
| Unknown YY ^d | | | | | | | | |
| 501 ^a | 25 | 6 | 0 | 0 | 0 | 0 | 25 | 6 |
| Multiple ^b | 25 | 13 | 50 | 31 | 0 | 0 | 38 | 15 |
| Subtotal | 25 | 6 | 50 | 31 | 0 | 0 | 25 | 6 |
| Statewide | | | | | | | | |
| Total | 28 | 1 | 19 | 2 | 22 | 15 | 28 | 1 |

^aLicenses were valid on private lands only.

^bHunters that purchased multiple hunting licenses for multiple hunting areas.

^cIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.

^dHunting activity occurred at unknown location within Management Unit YY.

Table 5. Number of turkeys harvested during the 2011 Michigan fall turkey hunting season.

| Area and hunting license | Land type | | | | | | | |
|--------------------------|-----------|--------|--------|--------|---------|--------|-----------------------------|--------|
| | Private | | Public | | Unknown | | All land types ^a | |
| | Total | 95% CL | Total | 95% CL | Total | 95% CL | Total | 95% CL |
| G | | | | | | | | |
| 401 | 7 | 2 | 6 | 2 | 0 | 0 | 13 | 3 |
| 501 ^b | 325 | 73 | 0 | 0 | 0 | 0 | 325 | 73 |
| Multiple ^c | 8 | 3 | 2 | 2 | 0 | 0 | 11 | 3 |
| Subtotal | 340 | 73 | 8 | 2 | 0 | 0 | 349 | 73 |
| GB | | | | | | | | |
| 402 | 23 | 5 | 8 | 3 | 0 | 0 | 31 | 5 |
| 501 ^b | 375 | 86 | 0 | 0 | 0 | 0 | 375 | 86 |
| Multiple ^c | 8 | 2 | 1 | 1 | 0 | 0 | 9 | 3 |
| Subtotal | 406 | 86 | 9 | 3 | 0 | 0 | 415 | 86 |
| GC | | | | | | | | |
| 403 | 8 | 3 | 5 | 2 | 0 | 0 | 13 | 3 |
| 501 ^b | 854 | 132 | 0 | 0 | 0 | 0 | 854 | 132 |
| Multiple ^c | 10 | 4 | 0 | 0 | 0 | 0 | 10 | 4 |
| Subtotal | 873 | 132 | 5 | 2 | 0 | 0 | 878 | 132 |
| HA | | | | | | | | |
| 407 ^b | 211 | 27 | 0 | 0 | 0 | 0 | 211 | 27 |
| Multiple ^c | 12 | 5 | 0 | 0 | 0 | 0 | 12 | 5 |
| Subtotal | 223 | 28 | 0 | 0 | 0 | 0 | 223 | 28 |
| L | | | | | | | | |
| 404 | 93 | 15 | 49 | 11 | 2 | 2 | 144 | 19 |
| 501 ^b | 735 | 135 | 0 | 0 | 0 | 0 | 735 | 135 |
| Multiple ^c | 25 | 6 | 5 | 3 | 0 | 0 | 30 | 8 |
| Subtotal | 854 | 136 | 54 | 12 | 2 | 2 | 909 | 137 |
| M | | | | | | | | |
| 405 | 205 | 27 | 91 | 20 | 4 | 4 | 300 | 32 |
| Multiple ^c | 1 | 1 | 2 | 2 | 0 | 0 | 4 | 2 |
| Subtotal | 206 | 27 | 94 | 20 | 4 | 4 | 304 | 32 |
| W | | | | | | | | |
| 406 | 14 | 4 | 6 | 2 | 0 | 0 | 20 | 4 |
| 501 ^b | 138 | 48 | 0 | 0 | 0 | 0 | 138 | 48 |
| Multiple ^c | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 1 |
| Subtotal | 154 | 48 | 6 | 2 | 0 | 0 | 160 | 48 |
| Eastern YY ^d | | | | | | | | |
| 501 ^b | 1,238 | 156 | 0 | 0 | 0 | 0 | 1,238 | 156 |
| Multiple ^c | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| Subtotal | 1,239 | 156 | 0 | 0 | 0 | 0 | 1,239 | 156 |
| Unknown YY ^e | | | | | | | | |
| 501 ^b | 244 | 71 | 0 | 0 | 0 | 0 | 244 | 71 |
| Multiple ^c | 2 | 2 | 1 | 1 | 0 | 0 | 4 | 2 |
| Subtotal | 246 | 71 | 1 | 1 | 0 | 0 | 247 | 71 |
| Statewide | | | | | | | | |
| Total ^a | 4,541 | 266 | 177 | 23 | 6 | 5 | 4,724 | 267 |

^aColumn and row totals for hunting effort may not equal statewide totals because of rounding errors.^bLicenses were valid on private lands only.^cHunters that purchased multiple hunting licenses for multiple hunting areas.^dIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.^eHunting activity occurred at unknown location within Management Unit YY.

Table 6. Proportion of hunters that rated their hunting experience as excellent, very good, or good during the 2011 Michigan fall turkey hunting season.

| Area and hunting license | Land type | | | | | | | |
|--------------------------|-----------|--------|--------|--------|---------|--------|----------------|--------|
| | Private | | Public | | Unknown | | All land types | |
| | Total | 95% CL | Total | 95% CL | Total | 95% CL | Total | 95% CL |
| G | | | | | | | | |
| 401 | 49 | 7 | 57 | 6 | 0 | 0 | 56 | 5 |
| 501 ^a | 58 | 6 | 0 | 0 | 0 | 0 | 58 | 6 |
| Multiple ^b | 72 | 12 | 100 | 0 | 0 | 0 | 77 | 10 |
| Subtotal | 58 | 5 | 59 | 6 | 0 | 0 | 58 | 5 |
| GB | | | | | | | | |
| 402 | 59 | 6 | 64 | 7 | 0 | 0 | 61 | 5 |
| 501 ^a | 64 | 6 | 0 | 0 | 0 | 0 | 64 | 6 |
| Multiple ^b | 58 | 10 | 100 | 0 | 0 | 0 | 58 | 10 |
| Subtotal | 64 | 5 | 64 | 7 | 0 | 0 | 64 | 5 |
| GC | | | | | | | | |
| 403 | 61 | 7 | 53 | 6 | 0 | 0 | 54 | 5 |
| 501 ^a | 64 | 4 | 0 | 0 | 0 | 0 | 64 | 4 |
| Multiple ^b | 71 | 15 | 0 | 0 | 0 | 0 | 71 | 15 |
| Subtotal | 64 | 4 | 53 | 6 | 0 | 0 | 64 | 4 |
| HA | | | | | | | | |
| 407 ^a | 47 | 3 | 0 | 0 | 0 | 0 | 47 | 3 |
| Multiple ^b | 49 | 11 | 0 | 0 | 0 | 0 | 49 | 11 |
| Subtotal | 47 | 3 | 0 | 0 | 0 | 0 | 47 | 3 |
| L | | | | | | | | |
| 404 | 51 | 4 | 45 | 5 | 50 | 33 | 48 | 3 |
| 501 ^a | 57 | 4 | 0 | 0 | 0 | 0 | 57 | 4 |
| Multiple ^b | 62 | 8 | 60 | 19 | 0 | 0 | 65 | 8 |
| Subtotal | 57 | 4 | 45 | 5 | 44 | 29 | 56 | 3 |
| M | | | | | | | | |
| 405 | 52 | 4 | 44 | 5 | 50 | 23 | 51 | 3 |
| Multiple ^b | 25 | 19 | 83 | 13 | 0 | 0 | 60 | 14 |
| Subtotal | 51 | 4 | 45 | 5 | 50 | 23 | 51 | 3 |
| W | | | | | | | | |
| 406 | 47 | 7 | 73 | 8 | 0 | 0 | 56 | 5 |
| 501 ^a | 52 | 10 | 0 | 0 | 0 | 0 | 52 | 10 |
| Multiple ^b | 64 | 23 | 67 | 24 | 0 | 0 | 74 | 19 |
| Subtotal | 52 | 9 | 72 | 8 | 0 | 0 | 53 | 8 |
| Eastern YY ^c | | | | | | | | |
| 501 ^a | 54 | 3 | 0 | 0 | 0 | 0 | 54 | 3 |
| Multiple ^b | 75 | 19 | 0 | 0 | 0 | 0 | 75 | 19 |
| Subtotal | 54 | 3 | 0 | 0 | 0 | 0 | 54 | 3 |
| Unknown YY ^d | | | | | | | | |
| 501 ^a | 49 | 7 | 0 | 0 | 0 | 0 | 49 | 7 |
| Multiple ^b | 75 | 13 | 100 | 0 | 0 | 0 | 75 | 13 |
| Subtotal | 49 | 7 | 100 | 0 | 0 | 0 | 49 | 7 |
| Statewide | | | | | | | | |
| Total | 56 | 2 | 49 | 3 | 45 | 17 | 56 | 2 |

^aLicenses were valid on private lands only.

^bHunters that purchased multiple hunting licenses for multiple hunting areas.

^cIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.

^dHunting activity occurred at unknown location within Management Unit YY.

Table 7. Number of hunters, hunting effort, harvest, hunter success, and hunter satisfaction during the 2011 Michigan fall turkey hunting season, summarized by county.

| County | Hunters ^a | | Hunting efforts (days) ^a | | Harvest ^a | | Hunter success | | Hunter satisfaction ^b | |
|------------|----------------------|--------|-------------------------------------|--------|----------------------|--------|----------------|--------|----------------------------------|--------|
| | Total | 95% CL | Total | 95% CL | Total | 95% CL | % | 95% CL | % | 95% CL |
| Alger | 65 | 16 | 378 | 122 | 19 | 10 | 26 | 11 | 43 | 13 |
| Allegan | 554 | 85 | 3,453 | 746 | 169 | 82 | 23 | 6 | 52 | 8 |
| Baraga | 15 | 8 | 90 | 69 | 4 | 4 | 29 | 24 | 43 | 27 |
| Barry | 530 | 82 | 3,820 | 869 | 118 | 42 | 20 | 6 | 47 | 8 |
| Bay | 118 | 45 | 829 | 415 | 34 | 28 | 24 | 17 | 62 | 19 |
| Berrien | 231 | 55 | 1,454 | 433 | 67 | 29 | 28 | 11 | 59 | 12 |
| Branch | 304 | 70 | 1,982 | 664 | 50 | 28 | 16 | 9 | 62 | 11 |
| Calhoun | 447 | 83 | 3,074 | 765 | 150 | 52 | 32 | 9 | 67 | 9 |
| Cass | 284 | 64 | 2,125 | 737 | 101 | 51 | 26 | 10 | 61 | 11 |
| Charlevoix | 70 | 34 | 236 | 145 | 35 | 24 | 49 | 25 | 75 | 21 |
| Chippewa | 68 | 16 | 437 | 134 | 15 | 8 | 22 | 10 | 55 | 12 |
| Clinton | 287 | 68 | 1,637 | 539 | 76 | 36 | 27 | 11 | 60 | 12 |
| Delta | 121 | 21 | 614 | 145 | 48 | 13 | 37 | 9 | 51 | 9 |
| Dickinson | 102 | 19 | 556 | 136 | 27 | 11 | 25 | 8 | 50 | 10 |
| Eaton | 281 | 68 | 1,479 | 439 | 33 | 22 | 11 | 8 | 65 | 12 |
| Genesee | 462 | 87 | 3,189 | 775 | 132 | 50 | 25 | 8 | 63 | 9 |
| Gogebic | 45 | 13 | 258 | 93 | 5 | 4 | 12 | 9 | 40 | 15 |
| Gratiot | 223 | 58 | 1,840 | 619 | 61 | 30 | 27 | 12 | 59 | 13 |
| Hillsdale | 365 | 77 | 1,891 | 556 | 141 | 64 | 31 | 10 | 70 | 10 |
| Houghton | 12 | 7 | 60 | 48 | 0 | 0 | 0 | 0 | 46 | 29 |
| Huron | 316 | 72 | 1,673 | 494 | 116 | 54 | 30 | 11 | 42 | 11 |

^aNumber of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

^bProportion of hunters that rated their hunting experience as excellent, very good, or good.

Table 7 (continued). Number of hunters, hunting effort, harvest, hunter success, and hunter satisfaction during the 2011 Michigan fall turkey hunting season, summarized by county.

| County | Hunters ^a | | Hunting efforts (days) ^a | | Harvest ^a | | Hunter success | | Hunter satisfaction ^b | |
|------------|----------------------|-----------|--|-----------|----------------------|-----------|----------------|-----------|----------------------------------|-----------|
| | Total | 95% CL | Total | 95% CL | Total | 95% CL | % | 95% CL | % | 95% CL |
| Ingham | 406 | 81 | 2,610 | 701 | 131 | 45 | 32 | 9 | 75 | 8 |
| Ionia | 222 | 59 | 1,351 | 473 | 38 | 24 | 17 | 10 | 60 | 13 |
| Iron | 121 | 21 | 622 | 151 | 59 | 15 | 45 | 9 | 59 | 9 |
| Isabella | 214 | 55 | 1,275 | 379 | 76 | 34 | 36 | 13 | 53 | 13 |
| Jackson | 557 | 94 | 3,450 | 790 | 184 | 62 | 30 | 8 | 64 | 8 |
| Kalamazoo | 345 | 66 | 2,425 | 647 | 93 | 34 | 26 | 8 | 51 | 10 |
| Kent | 631 | 98 | 3,250 | 674 | 173 | 51 | 27 | 7 | 64 | 8 |
| Keweenaw | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lapeer | 518 | 92 | 3,007 | 676 | 178 | 57 | 31 | 8 | 58 | 9 |
| Lenawee | 387 | 80 | 2,687 | 739 | 112 | 50 | 26 | 9 | 59 | 10 |
| Livingston | 493 | 86 | 3,271 | 855 | 98 | 41 | 18 | 7 | 62 | 9 |
| Luce | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mackinac | 22 | 10 | 93 | 47 | 6 | 5 | 29 | 20 | 67 | 20 |
| Macomb | 156 | 50 | 1,064 | 424 | 46 | 31 | 26 | 14 | 61 | 16 |
| Marquette | 79 | 17 | 519 | 178 | 21 | 9 | 27 | 10 | 43 | 11 |
| Mecosta | 210 | 26 | 1,138 | 185 | 50 | 13 | 22 | 6 | 49 | 7 |
| Menominee | 139 | 22 | 718 | 138 | 46 | 14 | 31 | 8 | 51 | 8 |
| Midland | 307 | 66 | 1,728 | 468 | 82 | 33 | 27 | 9 | 52 | 11 |
| Montcalm | 415 | 79 | 2,415 | 601 | 137 | 47 | 32 | 9 | 52 | 10 |
| Muskegon | 239 | 55 | 1,711 | 596 | 71 | 33 | 27 | 10 | 51 | 12 |
| Newaygo | 389 | 33 | 2,536 | 311 | 88 | 19 | 21 | 4 | 46 | 5 |

^aNumber of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

^bProportion of hunters that rated their hunting experience as excellent, very good, or good.

Table 7 (continued). Number of hunters, hunting effort, harvest, hunter success, and hunter satisfaction during the 2011 Michigan fall turkey hunting season, summarized by county.

| County | Hunters ^a | | Hunting efforts (days) ^a | | Harvest ^a | | Hunter success | | Hunter satisfaction ^b | |
|-------------|----------------------|-----------|--|-----------|----------------------|-----------|----------------|-----------|-------------------------------------|-----------|
| | Total | 95% CL | Total | 95% CL | Total | 95% CL | % | 95% CL | % | 95% CL |
| Oakland | 487 | 89 | 2,433 | 559 | 130 | 48 | 25 | 8 | 49 | 9 |
| Oceana | 191 | 26 | 1,295 | 243 | 37 | 11 | 18 | 5 | 40 | 7 |
| Ontonagon | 51 | 14 | 315 | 111 | 26 | 10 | 50 | 14 | 61 | 14 |
| Ottawa | 425 | 80 | 2,510 | 675 | 170 | 62 | 36 | 9 | 72 | 8 |
| Saginaw | 461 | 87 | 3,189 | 938 | 157 | 57 | 32 | 9 | 53 | 10 |
| St. Clair | 605 | 99 | 3,754 | 824 | 120 | 48 | 19 | 7 | 52 | 8 |
| St. Joseph | 193 | 51 | 1,747 | 670 | 52 | 30 | 23 | 11 | 61 | 13 |
| Sanilac | 594 | 98 | 4,112 | 928 | 109 | 41 | 18 | 6 | 52 | 8 |
| Schoolcraft | 34 | 11 | 275 | 129 | 14 | 8 | 42 | 17 | 52 | 17 |
| Shiawassee | 265 | 66 | 1,636 | 587 | 117 | 47 | 42 | 12 | 55 | 12 |
| Tuscola | 585 | 98 | 3,536 | 830 | 184 | 66 | 27 | 8 | 57 | 8 |
| Van Buren | 349 | 72 | 2,366 | 722 | 101 | 41 | 27 | 9 | 52 | 10 |
| Washtenaw | 347 | 72 | 2,540 | 736 | 94 | 40 | 26 | 9 | 60 | 10 |
| Unknown | 1,250 | 128 | 6,213 | 901 | 322 | 73 | 24 | 5 | 48 | 5 |

^aNumber of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

^bProportion of hunters that rated their hunting experience as excellent, very good, or good.